

Work Order ID 141900

February 19, 2016 8:37:55 AM

141900

Page 1

Item ID: 646.9701

Revision ID:

Item Name: Cutter Sub Assembly

Start Date: 2/19/2016 Start Qty: 10.00

Required Date: 2/26/2016 Req'd Qty: 10.00

Reference:

Accept

N9000040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

646.9700

C (ECN)

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

10X 16/2/23

DAS
36
9-89

120

0.00

120

Small Fab

Memo

0.04

Small Fab

Assemble as per dwg and apply loctite 598 on all faying surfaces per note.

A/R RTV LOCTITE 598:

exp. date: 07/17

1133588

10X 16/02/24

DAS
36
9-89

130

QC5- Inspect part completeness to step on W/O

0.00

130

QC

Memo

0.00

Quality Control

10

DAS
36
9-89

FEB 24 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY					
Environment ☐		No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐		Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐		Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐		Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐		Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐		Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐		Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐		Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐		Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐		Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐		Manufacturing Process ☐	OTHER : _____					
Misidentified ☐		Past Due ☐						

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141900

Page 2

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: Cutter Sub Assembly

10

Cust Item ID:

10

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140	Identify as per dwg & Stock Locations:	0.00
-----	--	------

140

Packaging

Memo

0.00

Packaging

IDENTIFY AS PER IAW MPP-120

DAS
6
9-89

FEB 25 2049

150	QC21- Final Inspection - Work Order Release	0.00
-----	---	------

150

QC

Memo

0.02

Quality Control

FEB 25 2016

FEB 25 2016

MCS

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : ☐							

Picklist Print

February 19, 2016 8:38:00 AM

Page 1

Work Order ID: 141900

141900

Parent Item: 646.9701

646.9701

Parent Item Name: Cutter Sub Assembly

Start Date: 2/19/2016

Required Date: 2/26/2016

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV:A 12.08.13 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
646.9710 *646.9710* Body		Manufactured	No			110	Each	16.0000	1	10			DAS 36 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				CCK013				16					
				127781				3					
				128805				10					
				130854				3					
646.9711 *646.9711* Blade		Manufactured	No			110	Each	38.0000	2	20			DAS 36 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				CCK106				8					
				129676				8					
				CCK108A				30					
				138180				30					

Picklist Print

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Page 2

Work Order ID: 141900

Parent Item: 646.9701

Parent Item Name: Cutter Sub Assembly

141900

646 9701

Start Date: 2/19/2016

Required Date: 2/26/2016

Start Qty: 10.00

Required Qty: 10.00

MS21042L08

Purchased

No

110

Each

1,564.000

6

60

MS21042I 08

Nut

**

16/02/19
DAS
36
9-89

Location

Loc Qty

Loc Code

CA

101

m129682

101

GA

227

m133134

3

m134063

224

OVER007

500

m134063

500

ST303

736

m133922

736

60

MS27039-08-19

Purchased

No

110

Each

1,009.000

6

60

MS27039-08-19

Screw

**

16/02/19
DAS
36
9-89

Location

Loc Qty

Loc Code

CCK06

200

m134142

200

GA

106

m132930

84

m133077

22

over006

620

m133483

20

m134063

600

ST277

83

m133769

83

37

23

Picklist Print

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Page 3

Work Order ID: 141900

141900

Parent Item: 646.9701

646 9701

Parent Item Name: Cutter Sub Assembly

Start Date: 2/19/2016

Required Date: 2/26/2016

Start Qty: 10.00

Required Qty: 10.00

NAS1149FN832P

Purchased

No

110

Each

3,873.000

12

120

NAS1149FN832P

DAS
36
9-89

Washer

16/02/19

Location

Loc Qty

Loc Code

GA

1493

M133316

16

M133769

1477

ST260a

1200

M134257

1200

ST262

1180

M133709

1180

120

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04559

SHEET 1 OF 1

DWG NO. 646.9700

REV: C

PREPARED BY

D. MEJIA

DATE: 06/11/2014

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: CUTTER SUB ASSY

APPROVED BY:

ENGR

[Signature]

MFG

[Signature]

QC

[Signature]

EFF.

NEXT ORDER

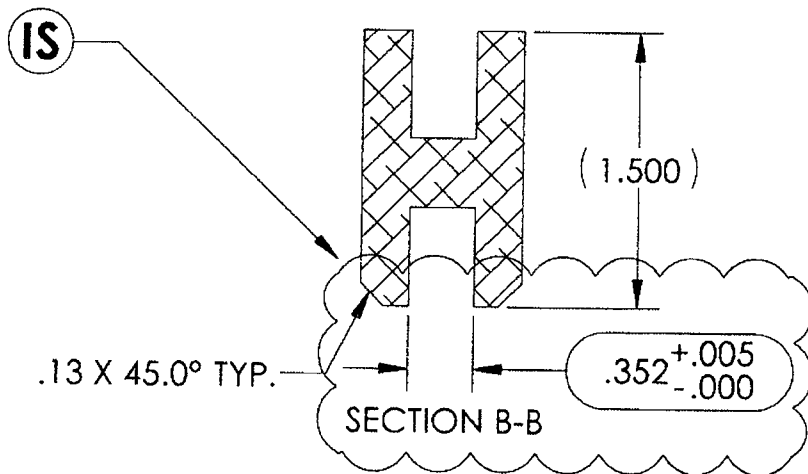
TRANSACTION CODES (TC):
A-ADD
R-REVISE
C-CREATE
D-DELETE

REASON: ADDED DIMENSION AND TOLERANCE

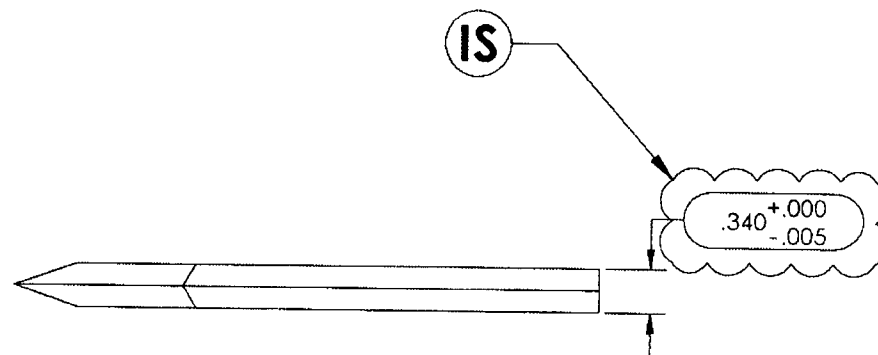
ECR:

D-14-05

SHEET 2, ZONE D7 IS:



SHEET 5, ZONE B5 IS:



20160217

SH 141900

DOCUMENTS EFFECTED:

☐ MDL

☐ INSTALL INSTRUCTIONS

☐ ICA

☐ FMS

☐ BOM

CHANGE CATEGORY

☐ MAJOR

☒ MINOR

DER REVIEW REQUIRED

☐ YES

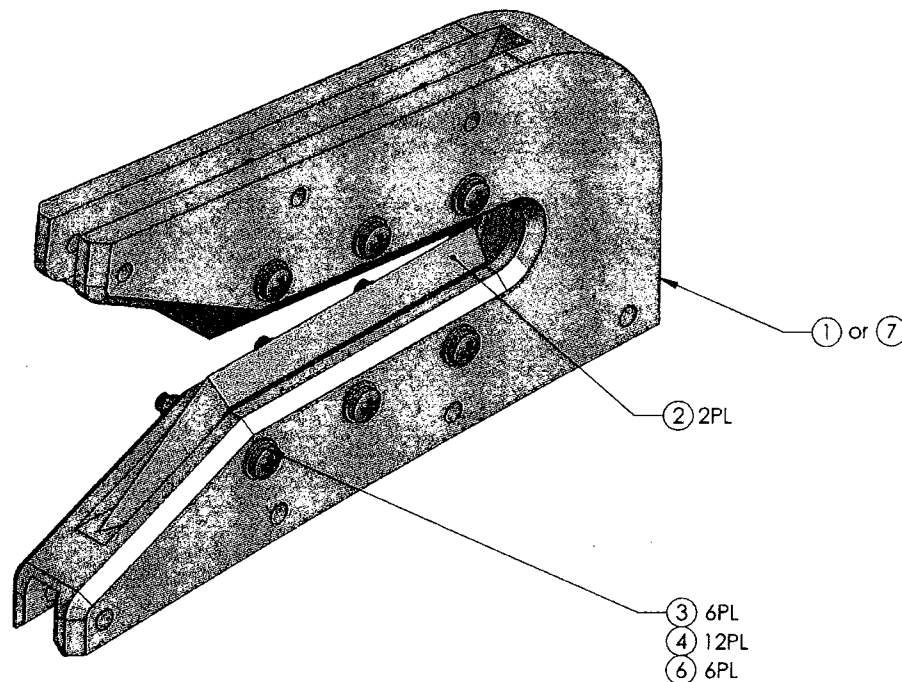
☒ NO

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION #2		MJC
2	INITIAL RELEASE	05/29/99	P. BRAVO
3	INCORPORATED ECN 02744-03038, 02912	06/05/13	P. BRAVO
4	INCORPORATED ECN 02967	07/03/13	P. BRAVO
5	INCORPORATED ECN 04039	08/09/13	P. BRAVO

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
PRETREAT PRC-DESOTO PR-148 ADHESION PROMOTER;
PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX
- 3 MATERIAL: AISI A2 TOOL STEEL
CONDITION: ANNEALED
POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX
- 5 DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
- 6 IDENTIFY IAW MPP-120
- 7 APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
- 9 ALL DIMENSIONS NOT SPECIFIED ARE CONTROLLED BY 646.9710.



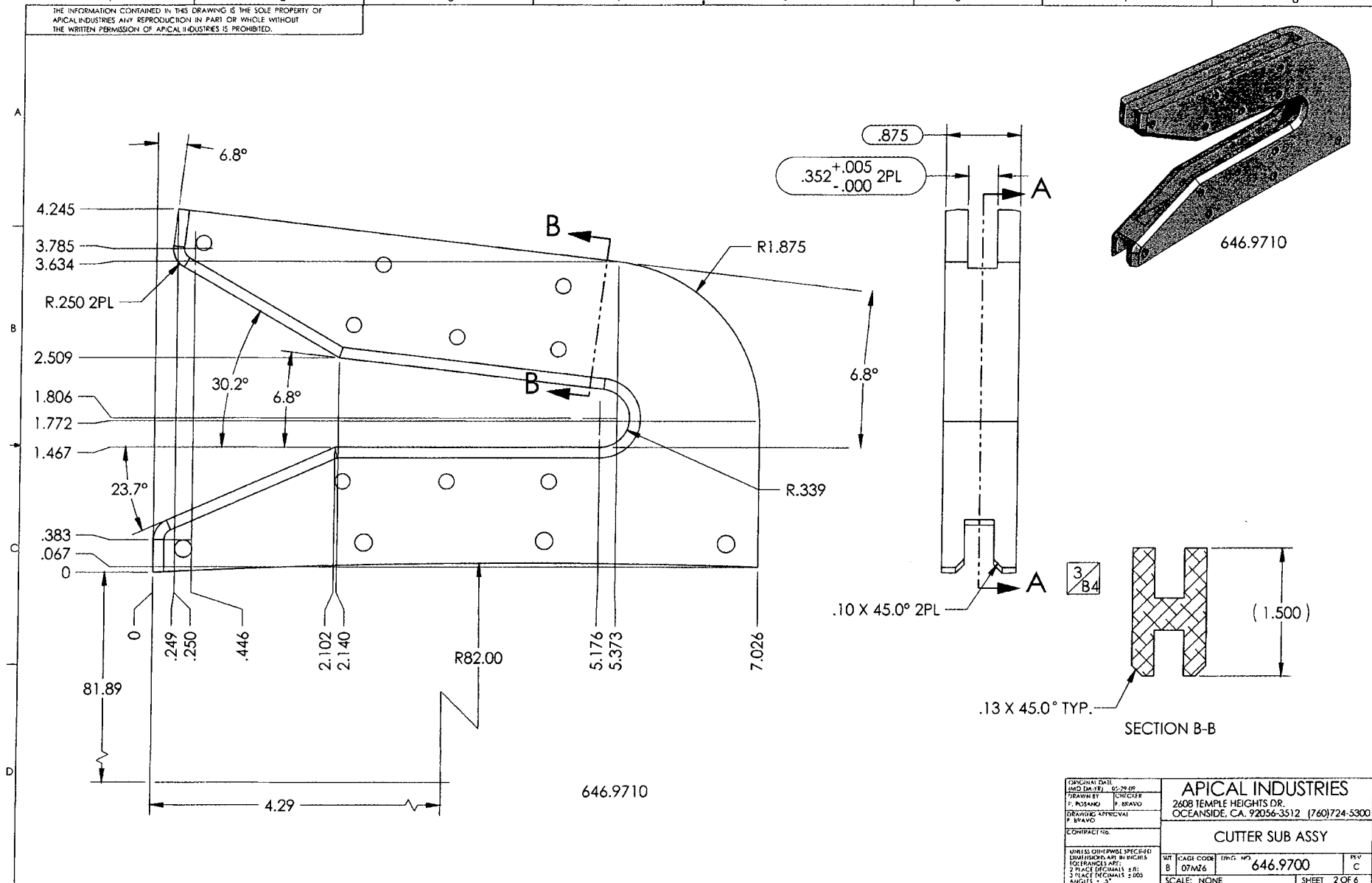
646.9701
or
646.9702

UNINCORPORATED ECN(s)

04559

1		7	646.9712	BODY (U CHANNEL)	△	△
6	6	6	601.1541	LOCKNUT	M521042L08	
A/R	A/R	5	601.2764	RTV, LOCITE 598		
12	12	4	601.2764	WASHER	HAS114R HB37P	
6	6	3	601.2765	SCREW	M527239-0819	
2	2	2	646.9711	BLADE		△
	1	1	646.9710	BODY	△	△
			646.9702	CUTTER SUB ASSY (U CHANNEL)		
			646.9701	CUTTER SUB ASSY		
QTY	FIND #	PART #	DESCRIPTION	MATL	SPEC.	
PARTS LIST						
NEXT ASSY (S)			APICAL INDUSTRIES			
646.9600			2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300			
			CUTTER SUB ASSY			
			UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°			
SUP	CAGE CODE	ENCL	REV	646.9700		
B	07M26			C		
SCALE NONE				SHEET 1 OF 6		

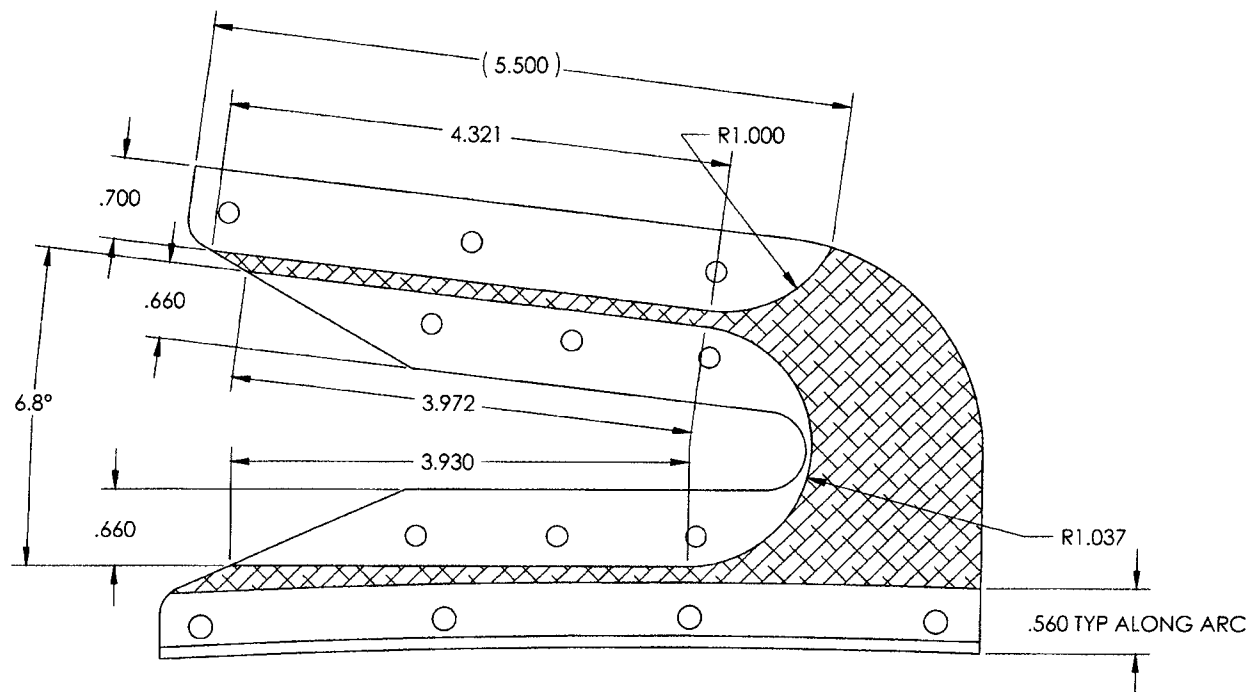
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ORIGINAL DATE DESIGNED BY DRAWN BY CHECKED BY DATE		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
C. CONTRACT NO.		CUTTER SUB ASSY	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°		QTY B	REV C
SCALE: NONE		PART NO. 646.9700	SHEET 2 OF 6

1 2 3 4 5 6 7 8

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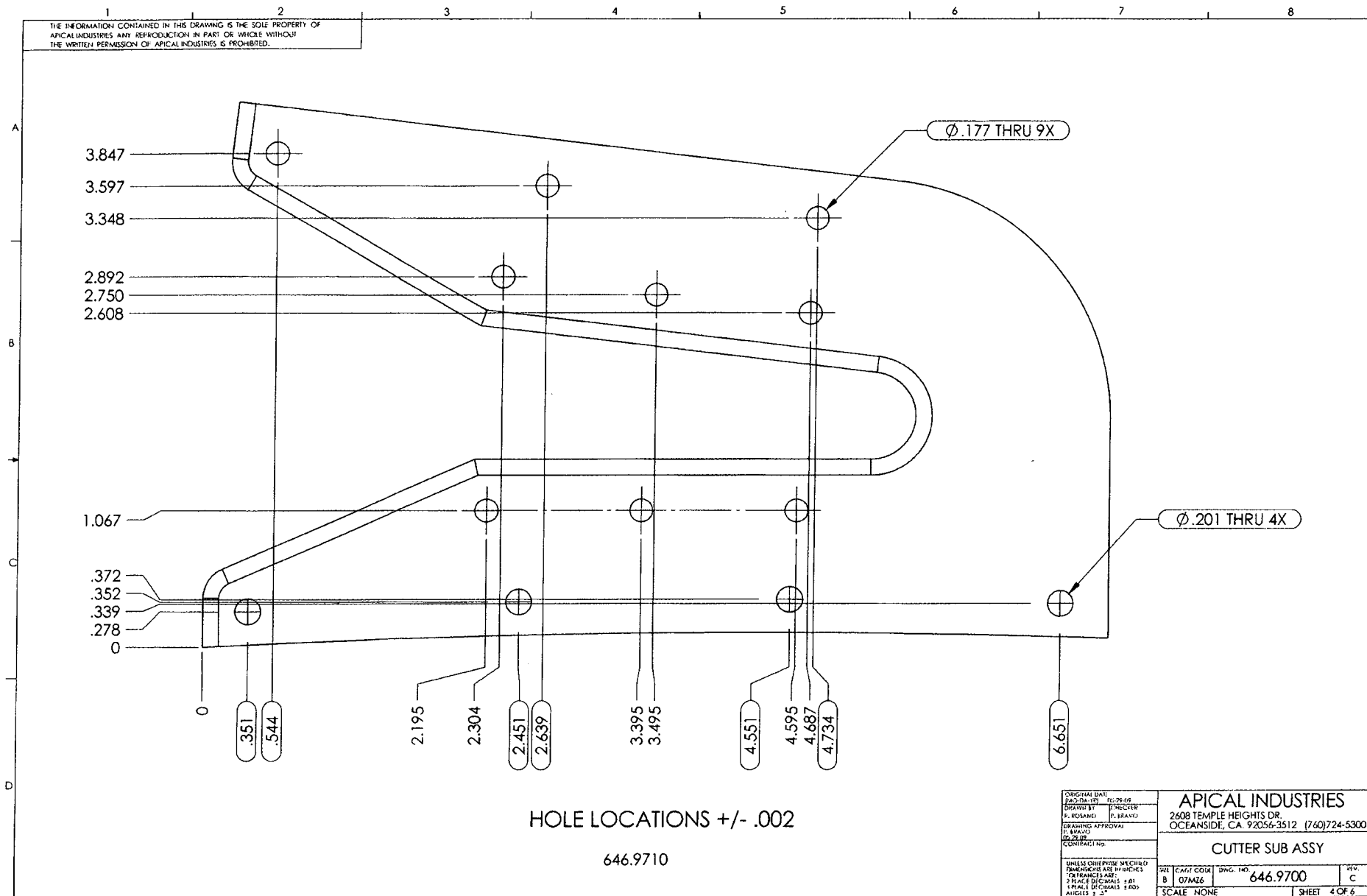


SECTION A-A $\frac{2}{C6}$

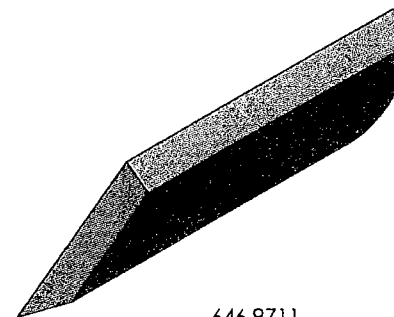
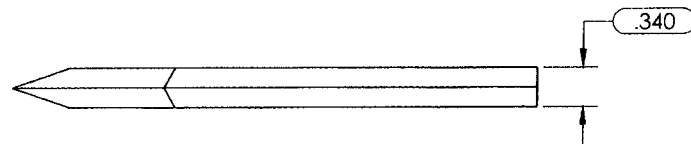
646.9710

ORIGINAL DATE 02-28-00		APICAL INDUSTRIES	
DRAWN BY: R. ROSANO		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: J. BRAVO		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL		CUTTER SUB ASSY	
P. ROSANO			
02-28-00			
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS < 1/16 .005 DECIMALS < .005 .005 ANGLES < 15 .005		SHEET 8	VIEW C
		SCALE NONE	SHEET 3 OF 6

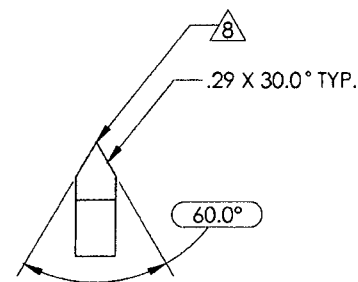
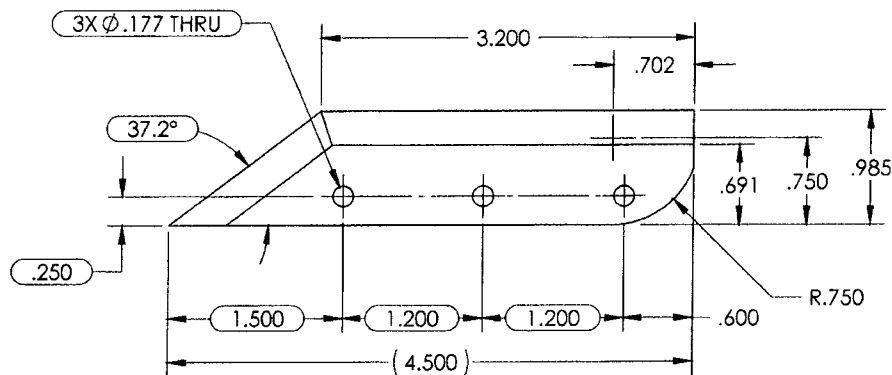
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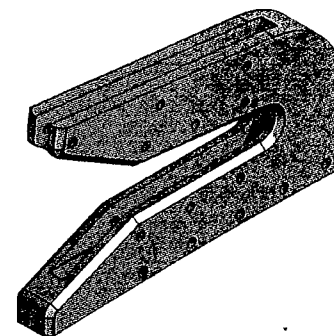
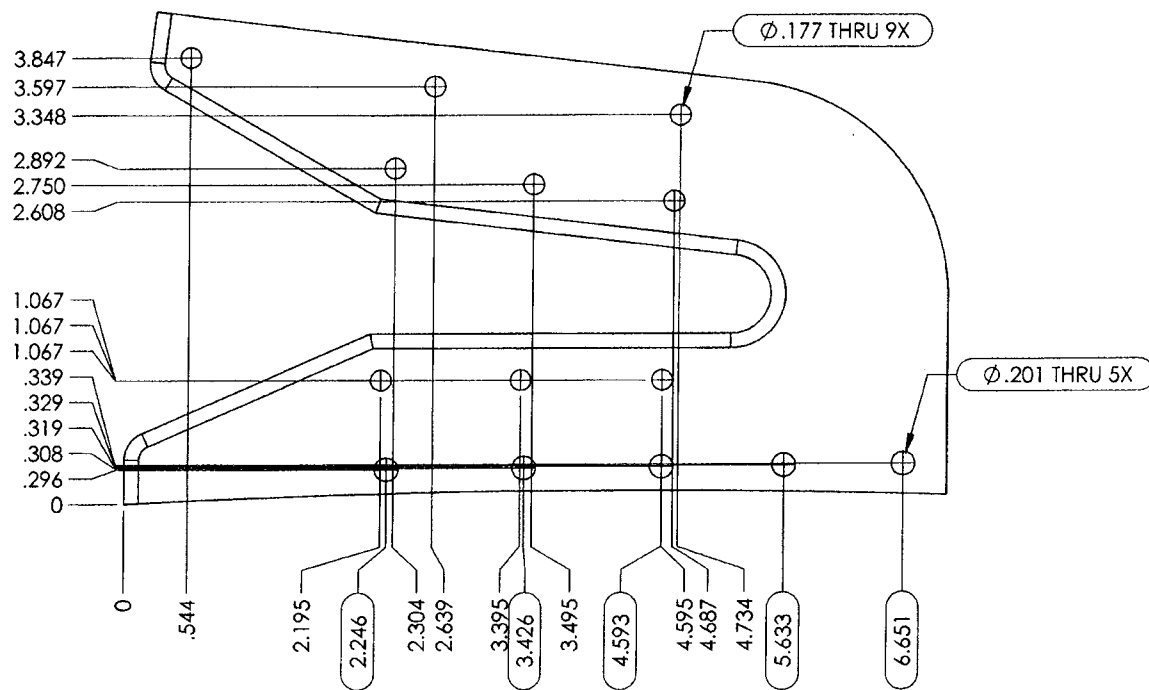
646.9711



646.9711

ORIGINAL DATE (DD-MMM-YY) 10-29-09		APICAL INDUSTRIES	
DRAWN BY K. ROSANO	DESIGNED BY H. BRANG	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWINGS APPROVAL K. BRANG		CUTTER SUB ASSY	
DATE 05-22-09		SCALE NONE	SHEET 5 OF 6
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES 1/8" DIMENSIONS ARE: 3 PLACES DECIMALS ± .003 ANGLES ± .5°		QTY B	REV. C
CAGE CODE 07M26		UNCL. NO. 646.9700	

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646.9712 $\triangle 9$

646.9712

DESIGNED BY: 05-29-06 DRAWN BY: SCHLEIER A. KOSANG P. BRAVO DRAWING APPROVAL: P. BRAVO 05-29-06 CONTRACT NO.		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .001$ ANGLES $\pm .5^\circ$		SHEET: C CAGE CODE: B QTY: 07M26 SCALE: NONE	DWG. NO.: 646.9700 SHEET: 6 OF 6
CUTTER SUB ASSY			